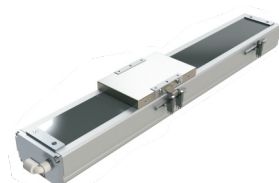


Single Axis Robots

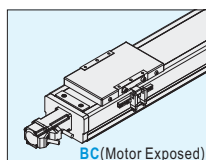
YCBSC12 Series

Ball Screw Drive, Clean Room Environment

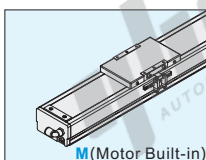


Code	Base		Guide		Slider		Cover		Operating Ambient
	Material	Surface Treatment	Material	Surface Treatment	Material	Surface Treatment	Material	Surface Treatment	
YCBSC12	Aluminum Alloy	Anodize	Iron	—	Aluminum Alloy	Anodize	Aluminum Alloy	Anodize	0~40°C 35~85%RH No Condensation

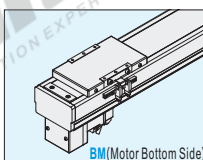
! This product does not contain a motor, the motor must be purchased separately.



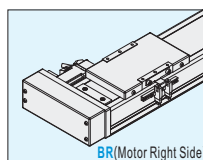
BC (Motor Exposed)



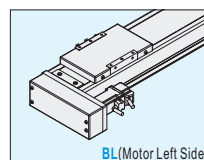
M (Motor Built-in)



BM (Motor Bottom Side)



BR (Motor Right Side)

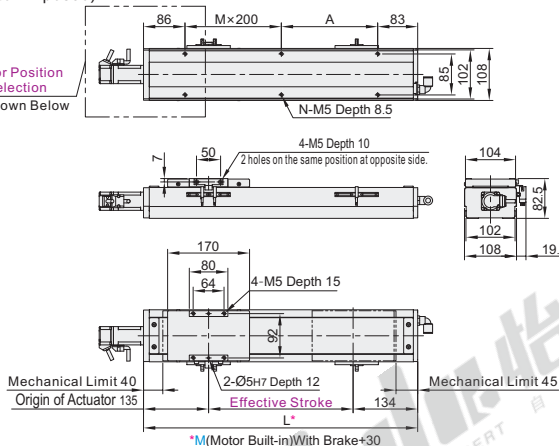


BL (Motor Left Side)

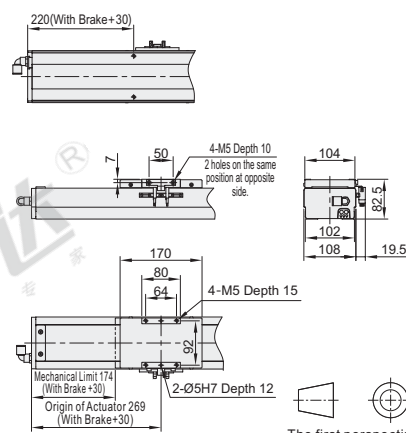
Motor Position:

BC (Motor Exposed)

Motor Position Selection
As Shown Below



M (Motor Built-in)



Motor Position Selection

BM (Motor Bottom Side)		BR (Motor Right Side)		BL (Motor Left Side)	
Technical drawing of BM (Motor Bottom Side) configuration. Dimensions include: 84, 104, 102, 108, 19.5, 4-M5 Depth 10, 2 holes on the same position at opposite side, 50, 104, 102, 108, 19.5, Origin of Actuator 133, Mechanical Limit 38, 2-Ø5H7 Depth 12, 4-M5 Depth 15, 64, 80, 170.		Technical drawing of BR (Motor Right Side) configuration. Dimensions include: 129, 104, 102, 108, 19.5, 71.5, 4-M5 Depth 10, 2 holes on the same position at opposite side, 50, 104, 102, 108, 19.5, 170, 64, 4-M5 Depth 15, 2-Ø5H7 Depth 12, Mechanical Limit 83, Origin of Actuator 178.		Technical drawing of BL (Motor Left Side) configuration. Dimensions include: 129, 104, 102, 108, 19.5, 71.5, 4-M5 Depth 10, 2 holes on the same position at opposite side, 50, 104, 102, 108, 19.5, Origin of Actuator 178, Mechanical Limit 83, 2-Ø5H7 Depth 12, 4-M5 Depth 15, 64, 80, 170.	

Part Number		Effective Stroke (50 mm Inc.)	Motor Position Selection	Motor Brand	Motor Output	Brake	Home Sensor	Limit Sensor
Code	Ball Screw Lead							
YCBSC12	5	100~1050 Non-standard stroke can be customized	M (Motor Built-in) BC (Motor Exposed) BM (Motor Bottom Side) BR (Motor Right Side) BL (Motor Left Side) *M (Motor Built-in) Motor Output are not suitable for 57 stepper motors.	P (Panasonic) Y (Yaskawa) M (Mitsubishi) T (Delta) H (Inovance) L (Leadshine)	10 (100W Servo) 57 (57 Stepping) ! 57 Stepping Only applicable to Leadshine brand. ! If 57 series stepper motors are used, it is recommended to choose the model with the maximum static torque greater than 0.64 N.m.	N (Without Brake) B (With Brake)	In Side A (Motor Side) B (Opposite Motor Side) Out Side C (Motor Side) D (Opposite Motor Side) No Sensor E (No Sensor)	In Side 1 (1 Pc) 2 (2 Pcs) Out Side 3 (1 Pc) 4 (2 Pcs) No Sensor 5 (No Sensor)
	10							
	16							
	20							

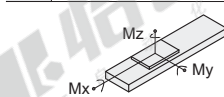
Specification

Recommended Motor Output		100W Servo			
Spec	Positioning Repeatability	±0.01			
	Ball Screw Lead	5	10	16	20
	Maximum Payload(kg)	Horizontal	50	30	22
		Vertical	12	8	5
	Rated Thrust (N)	340	170	106	85
Parts	Ball Screw Outer Diameter	16			
	Linear Guide Rail	12×8 Double rails, double blocks			
	Home Sensor	Out Side	EE-SX672(NPN)		
		In Side	EE-SX674(NPN)		

① Please contact us for OMRON Brand or PNP Sensor.

Allowable Moment Table

Mxd	130N.m
Myd	150N.m
Mzd	150N.m



The torque value in the table is dynamic allowable torque based on the running life of sliding table of 10000km.

Torque conditions:

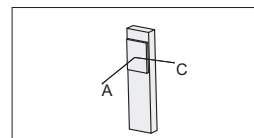
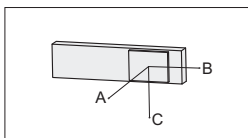
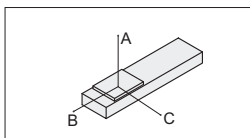
$$Mx/Mxd + My/Myd + Mz/Mzd \leq 1$$

(Mx, My, Mz are the actual moments in each direction)

Explanation:

1. The actual load shall meet the following conditions:
(a) Meet the maximum load condition in the "Specification" table.
(b) Satisfy the torque condition in the "Allowable Moment Table" if beyond the conditions of use will greatly reduce the life of the slide table.
2. The data in the table is based on the rated life of 10000km.
3. The repeated positioning accuracy in the table is a unidirectional value.
4. The maximum speed of the lead screw drive slider is reached after a certain travel. Need to be reduced. In order to avoid the resonance of the sliding table, different travel corresponding please refer to the table below for the maximum speed.
5. Rated acceleration of the slide table is 0.3G, and the short-stroke slide table may not work reach top speed.
6. If the sliding table is used vertically, please choose the belt brake motor.

Load allowable moment table (unit: mm)



Horizontal installation		A	B	C
Lead5	30kg	882	65	78
	40kg	606	43	51
	50kg	437	29	35
	15kg	875	138	157
Lead10	25kg	485	73	83
	30kg	386	56	64
	5kg	1300	450	456
Lead16	10kg	650	210	215
	22kg	310	95	100
	5kg	1160	384	386
Lead20	10kg	561	180	181
	18kg	288	88	89

Wall-mounted installation		A	B	C
Lead5	25kg	100	84	1102
	35kg	63	52	725
	50kg	35	29	433
	10kg	250	221	1311
Lead10	20kg	110	97	633
	30kg	64	56	385
	5kg	465	450	1050
Lead16	10kg	250	245	650
	22kg	95	94	295
	6kg	317	316	955
Lead20	12kg	147	144	455
	18kg	89	88	288

Vertical installation		A	C
Lead5	5kg	544	544
	8kg	341	341
	12kg	227	227
Lead10	4kg	606	606
	8kg	303	303
Lead16	2kg	1085	1085
	5kg	655	655
Lead20	2kg	961	961
	3kg	639	639

Maximum Speed

Screw Outer Diameter	Motor Output	Lead	Stroke															
			100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850
16	100W Servo	5	250															225
		10	500															450
		16	800															720
		20	1000															900

Dimension Table

Motor Position	Dimension	Stroke															
		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850
M (Motor Built-in)	L	503	553	603	653	703	753	803	853	903	953	1003	1053	1103	1153	1203	1253
	A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
	M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
	N	4	6	6	6	6	8	8	8	10	10	10	10	10	12	12	12
	Weight(kg)※	6.8	7.2	7.6	8	8.4	8.8	9.2	9.6	10	10.4	10.8	11.2	11.6	12	12.4	12.8
BC (Motor Exposed)	L	369	419	469	519	569	619	669	719	769	819	869	919	969	1019	1069	1119
	A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
	M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
	N	4	6	6	6	6	8	8	8	10	10	10	10	10	12	12	12
	Weight(kg)※	6	6.4	6.8	7.2	7.6	8	8.4	8.8	9.2	9.6	10	10.4	10.8	11.2	11.6	12
BM (Motor Bottom Side)	L	367	417	467	517	567	617	667	717	767	817	867	917	967	1017	1067	1117
	A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
	M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
	N	4	6	6	6	6	8	8	8	10	10	10	10	10	12	12	12
	Weight(kg)※	6	6.4	6.8	7.2	7.6	8	8.4	8.8	9.2	9.6	10	10.4	10.8	11.2	11.6	12
BR (Motor Right Side)	L	412	462	512	562	612	662	712	762	812	862	912	962	1012	1062	1112	1162
	A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
	M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
	N	4	6	6	6	6	8	8	8	10	10	10	10	10	12	12	12
	Weight(kg)※	6.3	6.7	7.1	7.5	7.9	8.3	8.7	9.1	9.5	9.9	10.3	10.7	11.1	11.5	11.9	12.3
BL (Motor Left Side)	L	412	462	512	562	612	662	712	762	812	862	912	962	1012	1062	1112	1162
	A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
	M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
	N	4	6	6	6	6	8	8	8	10	10	10	10	10	12	12	12
	Weight(kg)※	6.3	6.7	7.1	7.5	7.9	8.3	8.7	9.1	9.5	9.9	10.3	10.7	11.1	11.5	11.9	12.3

※ Not include motor weight.

Single Axis Robots

YCBSC12 Series Ball Screw Drive,Clean Room Environment

☐ List of servo motor which should be matched

Brand	Motor Mark	Brake	Watt	Servo Motor Model	Driver Model
Panasonic	P	Without Brake(Horizontal)	100W	MSMF012L1U2M	MADLN05SE
		With Brake(Vertical)		MSMF012L1V2M	
Mitsubishi	M	Without Brake(Horizontal)	100W	HG-KN13J-S100	MR-JE-10A
		With Brake(Vertical)		HG-KN13BJ-S100	
Delta(B2)	T	Without Brake(Horizontal)	100W	ECMA-C20401GS	ASD-B2-0121-B
		With Brake(Vertical)		ECMA-C20401FS	

☐ Please consult our staff for other types of motor .

☐ The models listed in the table are motor and driver models sold on our official website. Only modular mechanical parts are provided for standard single axis robot models , without motors and drivers.



Part Number		Effective Stroke	Motor Position	Motor Brand	Motor Output	Brake	Home Sensor	Limit Sensor
Code	Ball Screw Lead	(50 mm Inc.)	Selection					
YCBSC12	5	100-1050	BC(Motor Exposed)	P(Panasonic)	10(100W Servo)	N(Without Brake)	Out Side	Out Side
	10		BM(Motor Bottom Side)	Y(Yaskawa)	57(57 Stepping)	B(With Brake)	C(Motor Side)	3(1 Pc)
			BR(Motor Right Side)	M(Mitsubishi)			D(OppoSite Motor Side)	4(2 Pcs)

YCBSC12-10-550-BM-M-10-N-C-4



● Discount price		
Per	1~4	5~
Price	100%	Additional quotation



Delivery	
13	

☐ Quantity (1~4 Pcs)